The MC31-22Ex0-i data repeater is designed to isolate and transmit standard current signals from the hazardous area to the safe area.

The dual channel control unit provides input and output circuits that can process current signals 0/4...20 mA. A green LED provides power "ON" indication.

The input and output circuits of both channels are isolated from each other and from the supply voltage.

Input signals are passed without attenuation to the output.

- **Galvanic isolation of standard analogue signals**
- **Two completely isolated channels**
- **Intrinsically safe input circuits [EEx ia] IIC**
- **Input circuits 0/4...20 mA**
- **Output circuits 0/4...20 mA**
- **Linearity ≤ 0.1 %**
- **Temperature drift ≤ 0.005 %/K of final value**
Analogue Data Transmitters

**Type**
- MC31-22Ex0-1/24VDC
- Ident-No. 90 403 00

**Supply Voltage** $U_B$
- $18...35$ VDC
- Ripple $W_{pp}$ $\leq 10 \%$
- Overvoltage trigger $39 \text{ V} \pm 1 \text{ V}$
- Power/current consumption $< 3.5 \text{ W}$
- Galvanic isolation between input circuit, output circuit and supply voltage for $250 \text{ V}_{rms}$, test voltage $2.5 \text{ kV}_{rms}$

**Input Circuits**
- Input resistance $100 \Omega$
- Operating characteristics $0/4...20\text{ mA}$

**Output Circuit**
- Load $\leq 600 \Omega$
- Output current $0/4...20\text{ mA}$

**Ex-Approval acc. to Certification of Conformity**
- TÜV 98 ATEX 1259X

**Maximum nominal values**
- No-load voltage $U_0$ $9.6 \text{ V}$
- Short-circuit current $I_0$ $1 \text{ mA}$
- Output power $P_0$ $3 \text{ mW}$

**Maximum external inductances/capacitances**
- $[EEx \, \text{ia/ib}]$ IIB $1 \text{ H}/26 \mu\text{F}$
- $[EEx \, \text{ib/ib}]$ IIC $1 \text{ H}/3.5 \mu\text{F}$

**Transfer Characteristics**
- Linearity tolerance $\leq 0.1 \%$ of final value (typically $0.03 \%$)
- Effect of load impedance negligible
- Effect of supply voltage impedance negligible
- Ambient temperature sensitivity $\leq 0.005 \%/\text{K}$ of final value
- Pulse rise time (10 %...90 %) $< 60 \text{ ms}$
- Pulse release time (90 %...10 %) $< 60 \text{ ms}$

**LED Indications**
- Power “ON” green

**Eurocard**
- Material glass-fiber reinforced epoxy resin, quality class FR4
- Front panel plastic, $4\text{TE} = 20.32 \text{ mm}$
- Individually interlocking
- Connection connector per DIN 41612, type F, 32-pole (series z+d)
- Operating temperature $-25...+60 \, ^\circ\text{C}$
- Coding No. 118

**Technical Specifications**
- 100 x 160 mm (DIN 41494)
- 2468101214161820222426283032
- d b z